



102.174

SEQUENCE LISTING

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<120> LIPOPEPTIDES INDUCING T LYMPHOCYTIC CYTOTOXICITY
BEARING AT LEAST ONE AUXILIARY T EPITOPE, AND USES FOR
VACCINATION

<130> 102.174

<140> 09/673,166

<141> 2001-04-04

<150> PCT/FR99/00792

<151> 1999-04-06

<160> 276

<170> PatentIn Ver. 2.1

<210> 1

<211> 14

<212> PRT

<213> Clostridium tetanus

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<223> amino acids 830-843 of the tetanus toxin

<400> 1

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu

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<213> Human Papillomavirus (HPV)

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<223> amino acids 43-57 of HPV E7 protein

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Gly Gln Ala Glu Pro Asp Arg Ala His Asn Ile Val Thr Phe

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<213> Homo sapiens

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<221> LIPID

<222> (1)

<223> dipalmitoyl-lysyl chain on N-terminal residue

<400> 3

Ser Ser Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Ala Ala Ala Ala Ala Gly Ile Gly Ile Leu Thr Val
20 25

<210> 4

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<213> Homo sapiens

<220>

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<222> (1)

<223> dipalmitoyl-lysyl chain on N-terminal residue

<400> 4

Ser Ser Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
20 25

<210> 5

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<223> dipalmitoyl-lysyl chain on N-terminal residue

<400> 5

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
20 25

<210> 6

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<213> Homo sapiens

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<222> (1)

<223> monopalmitoyl-lysyl chain on N-terminal residue

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Ser Ser Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
 1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
 20 25

<210> 7

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<222> (1)

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Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
 1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
 20 25

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<213> Homo sapiens

<220>

<223> A hydrazine is bound between the N-terminal lysine and isoleucine at position 2

<400> 8

Lys Ile Leu Lys Glu Pro Val His Gly Val
 1 5 10

<210> 9

<211> 15

<212> PRT

<213> Homo sapiens

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<223> aldehyde group bound to N-terminal residue

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<222> (15)

<223> palmitoyl chain on C-terminal lysine residue

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Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Lys
 1 5 10 15

<210> 10
<211> 9
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<220>
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myeloid leukemia translocation)

<400> 10
Glu Asp Ala Glu Leu Asn Pro Arg Phe
1 5

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Met Glu Tyr Leu Glu Lys Lys Asn Phe
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<210> 20
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Leu Phe Gln Lys Leu Ala Ser Gln Leu
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<220>
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<210> 22

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<400> 22
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<210> 23
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<213> Homo sapiens

<220>

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Ile Gln Gln Met Arg Asn Lys Phe Ala

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Gln Met Arg Asn Lys Phe Ala Phe

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<210> 28

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Asn Pro Arg Phe Leu Lys Asp Asn Leu

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<212> PRT

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<220>

<400> 29

Thr Pro Asp Cys Ser Ser Asn Glu Asn Leu

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<220>
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<210> 34
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myeloid leukemia translocation)

<400> 34

Lys Pro Leu Arg Arg Gln Val Thr Val
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<210> 35

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<212> PRT

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<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 35

Ser Pro Ala Pro Val Pro Ser Thr Leu
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<210> 36

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 36

Glu Arg Cys Lys Ala Ser Ile Arg Arg
1 5

<210> 37

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<400> 37

Asp Arg Gln Arg Trp Gly Phe Phe Arg Arg
1 5 10

<210> 38

<211> 9

<212> PRT

<213> Homo sapiens

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<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 38

Gln Arg Val Gly Asp Leu Phe Gln Lys

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<210> 39

<211> 9

<212> PRT

<213> Homo sapiens

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myeloid leukemia translocation)

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Phe Arg Val His Ser Arg Asn Gly Lys

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<210> 40

<211> 9

<212> PRT

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<220>

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myeloid leukemia translocation)

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Leu Leu Tyr Lys Pro Val Asp Arg Val

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<210> 41

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<220>

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myeloid leukemia translocation)

<400> 41

Phe Leu Ser Ser Ile Asn Glu Glu Ile

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<211> 9

<212> PPT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 42

Gln Leu Leu Lys Asp Ser Phe Met Val
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<210> 43
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myeloid leukemia translocation)

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<210> 44
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Lys Leu Ser Glu Gln Glu Ser Leu Leu
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<210> 45
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<210> 46
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myeloid leukemia translocation)

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Gly Leu Tyr Gly Phe Leu Asn Val Ile Val

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myeloid leukemia translocation)

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myeloid leukemia translocation)

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Val Leu Leu Tyr Met Ala Thr Gln Ile

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<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

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Phe Ile Pro Leu Ile Ser Thr Arg Val

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<220>
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<210> 53
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<220>
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 myeloid leukemia translocation)

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 Lys Val Pro Glu Leu Tyr Glu Ile His Lys
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myeloid leukemia translocation)

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Lys Leu Ala Ser Gln Leu Gly Val Tyr

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<210> 55

<211> 10

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<220>

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<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

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Met Val Glu Leu Val Glu Gly Ala Arg Lys

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myeloid leukemia translocation)

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Ile Val His Ser Ala Thr Gly Phe Lys

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myeloid leukemia translocation)

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Ala Thr Gly Phe Lys Gln Ser Ser Lys

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<220>

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<223> epitope from BCR-ABL fusion protein (chronic myeloid leukemia translocation)

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Lys Gln Ser Ser Lys Ala Leu Gln Arg

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<223> epitope from BCR-ABL fusion protein (chronic myeloid leukemia translocation)

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Glu Val Tyr Glu Gly Val Trp Lys Lys Tyr

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<210> 60

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Ser Leu Ala Tyr Asn Lys Phe Ser Ile Lys

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<211> 9

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<223> epitope from BCR-ABL fusion protein (chronic myeloid leukemia translocation)

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Asn Leu Phe Ser Ala Leu Ile Lys Lys

1

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<210> 62

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic myeloid leukemia translocation)

<400> 62

Thr Val Ala Pro Ala Ser Gly Leu Pro His Lys
1 5 10

<210> 63

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic myeloid leukemia translocation)

<400> 63

Leu Ile Ser Thr Arg Val Ser Leu Arg Lys
1 5 10

<210> 64

<211> 9

<212> PRT

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<220>

<223> epitope from BCR-ABL fusion protein (chronic myeloid leukemia translocation)

<400> 64

Arg Ile Ala Ser Gly Ala Ile Thr Lys
1 5

<210> 65

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<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 65

Arg Val Glu Gly Asn Leu Ala Arg Val Glu Tyr
1 5 10

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<223> epitope from p53 protein

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Gly Ser Asp Cys Thr Thr Ile His Tyr

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<210> 67

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Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu

1

5

10

<210> 68

<211> 9

<212> PRT

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<223> epitope from p53 protein

<400> 68

Arg Met Pro Glu Ala Ala Pro Pro Val

1

5

<210> 69

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Arg Met Pro Glu Ala Ala Pro Arg Val

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<210> 70

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Ala Leu Asn Lys Met Phe Cys Gln Leu

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Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val

1

5

10

<210> 73

<211> 9

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<223> epitope from p53 protein

<400> 73

Leu Leu Gly Arg Asn Ser Phe Glu Val

1

5

<210> 74

<211> 9

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Pro Leu Asp Gly Glu Tyr Phe Thr Leu

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Arg Val Arg Ala Met Ala Ile Tyr Lys
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Arg Arg Thr Glu Glu Glu Asn Leu Arg
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Glu Leu Pro Pro Gly Ser Thr Lys Arg
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Leu Pro Glu Asn Asn Val Leu Ser Pro Leu
1 5 10

<210> 79
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<223> epitope from p53 protein

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Ala	Pro	Arg	Met	Pro	Glu	Ala	Ala	Pro	Pro	Val
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<212> PRT

<213> Homo sapiens

<220>

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<400> 80

Ala	Pro	Arg	Met	Pro	Glu	Ala	Ala	Pro	Arg	Val
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<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 81

Ala	Pro	Pro	Gln	His	Leu	Ile	Arg	Val
1				5				

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<213> Homo sapiens

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<223> epitope from p53 protein

<400> 82

Arg	Pro	Ile	Leu	Thr	Ile	Ile	Thr	Leu
1				5				

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<211> 10

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from p53 protein

<400> 83

Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu
1 5 10

<210> 84

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 84

Cys Gln Leu Ala Lys Thr Cys Pro Val
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<210> 85

<211> 9

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<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 85

Gly Leu Ala Pro Pro Gln His Leu Ile
1 5

<210> 86

<211> 9

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<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 86

Asn Thr Phe Arg His Ser Val Val Val
1 5

<210> 87

<211> 11

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<223> epitope from p53 protein

<400> 87

Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu
1 5 10

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 Arg Met Pro Glu Ala Ala Pro Pro Val
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 <213> Human Papillomavirus (HPV)

<220>
 <223> HPV epitope

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<210> 91
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 <212> PRT
 <213> Human Papillomavirus (HPV)

<220>
 <223> HPV epitope

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 1 5

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<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 92

Thr Leu Gly Ile Val Cys Pro Ile

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5

<210> 93

<211> 10

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 93

Thr Ile His Asp Ile Ile Leu Glu Cys Val

1

5

10

<210> 94

<211> 9

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 94

Lys Leu Pro Gln Leu Cys Thr Glu Leu

1

5

<210> 95

<211> 8

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 95

Arg Pro Pro Lys Leu Pro Gln Leu

1

5

<210> 96

<211> 23

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 96

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Tyr Arg Asp Gly Asn Pro Tyr
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<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 97

Ile Ser Glu Tyr Arg His Tyr Cys Tyr
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<210> 98

<211> 20

<212> PRT

<213> Human Papillomavirus (HPV)

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<223> HPV epitope

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Arg Gly Arg Ser Leu Tyr Asn Thr Val Ala Thr Leu

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LIPOPEPTIDE

<400> 274

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Arg Gly Arg Ile Leu Lys Glu Pro Val His Gly Val

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 20 25 30

Tyr Lys